

Environmental Protection Agency

Pt. 35, Subpt. E, App. E

change orders approved by the grantee prior to December 17, 1975.

6. Where renegotiation is required under this appendix D, such renegotiation is subject to 40 CFR 35.937-1, 35.937-6, 35.937-7, 35.937-9, and 35.937-10.

C. ANNOUNCEMENT AND SELECTION

The requirements of 40 CFR 35.937-2 through 35.937-4 shall not apply to step 1 work where the step 1 grant was awarded or the initiation of step 1 work was approved by EPA (under 40 CFR 35.917(e)) before March 1, 1976, nor to subsequent step 2 and step 3 work in accordance with 40 CFR 35.937-2(d), if the grantee is satisfied with the qualifications and performance of the engineer employed.

D. REQUIRED CONSULTING ENGINEERING PROVISIONS

Effective March 1, 1976, the subagreement clauses required under appendix C-1 must be included in the consulting engineering subagreement before grant assistance for step 1, 2 or 3 will be awarded and before initiation of step 1 work will be approved under 40 CFR 35.917(e) or 35.925-18(a) 3.

E. ENFORCEMENT

1. Refusal by a consulting engineer to insert the required access clause, or to allow access to its records, or to renegotiate a consulting engineering contract according to the foregoing requirements, will render costs incurred under such contract unallowable. Accordingly, all such costs will be questioned and disallowed pending compliance with this appendix.

2. Where the Regional Administrator determines that the time required to comply with the access to records and type of contract provisions of this appendix will unduly delay award of grant assistance, he may award the grant assistance conditioned upon compliance with this appendix within a specified period of time. In such event, no grant payments for the affected engineering work may be made until such compliance has been obtained.

APPENDIX E TO SUBPART E OF PART 35— INNOVATIVE AND ALTERNATIVE TECHNOLOGY GUIDELINES

1. *Purpose.* These guidelines provide the criteria for identifying and evaluating innovative and alternative waste water treatment processes and techniques. The Administrator may publish additional information.

2. *Authority.* These guidelines are provided under section 304(d)(3) of the Clean Water Act.

3. *Applicability.* These guidelines apply to:

a. The analysis of innovative and alternative treatment processes and techniques under §35.917-1(d)(8);

b. Increased grants for eligible treatment works under §§35.930-5 (b) and (c) and 35.908(b)(1);

c. The funding available for innovative and alternative processes and techniques under §35.915-1(b);

d. The funding available for alternatives to conventional treatment works for small communities under §35.915-1(e);

e. The cost-effectiveness preference given innovative and alternative processes and techniques in section 7 of appendix A to this subpart;

f. The treatment works that may be given higher priority on State project priority lists under §35.915(a)(1)(iii);

g. Alternative and innovative treatment systems in connection with Federal facilities;

h. Individual systems authorized by §35.918, as modified in that section to include unconventional or innovative sewers;

i. The access and reports conditions in §35.935-20.

4. *Alternative processes and techniques.* Alternative waste water treatment processes and techniques are proven methods which provide for the reclaiming and reuse of water, productively recycle waste water constituents or otherwise eliminate the discharge of pollutants, or recover energy.

a. In the case of processes and techniques for the treatment of effluents, these include land treatment, aquifer recharge, aquaculture, silviculture, and direct reuse for industrial and other nonpotable purposes, horticulture and revegetation of disturbed land. Total containment ponds and ponds for the treatment and storage of waste water prior to land application and other processes necessary to provide minimum levels of preapplication treatment are considered to be part of alternative technology systems for the purpose of this section.

b. For sludges, these include land application for horticultural, silvicultural, or agricultural purposes (including supplemental processing by means such as composting or drying), and revegetation of disturbed lands.

c. Energy recovery facilities include codisposal measures for sludge and refuse which produce energy; anaerobic digestion facilities (*Provided*, That more than 90 percent of the methane gas is recovered and used as fuel); and equipment which provides for the use of digester gas within the treatment works. Self-sustaining incineration may also be included provided that the energy recovered and productively used is greater than the energy consumed to dewater the sludge to an autogenous state.

d. Also included are individual and other onsite treatment systems with subsurface or other means of effluent disposal and facilities constructed for the specific purpose of septage treatment.

e. The term "alternative" as used in these guidelines includes the terms "unconventional" and "alternative to conventional" as used in the Act.

f. The term "alternative" does not include collector sewers, interceptors, storm or sanitary sewers or the separation thereof; or major sewer rehabilitation, except insofar as they are alternatives to conventional treatment works for small communities under §35.915-1(e) or part of individual systems under §35.918.

5. *Innovative processes and techniques.* Innovative waste water treatment processes and techniques are developed methods which have not been fully proven under the circumstances of their contemplated use and which represent a significant advancement over the state of the art in terms of meeting the national goals of cost reduction, increased energy conservation or recovery, greater recycling and conservation of water resources (including preventing the mixing of pollutants with water), reclamation or reuse of effluents and resources (including increased productivity of arid lands), improved efficiency and/or reliability, the beneficial use of sludges or effluent constituents, better management of toxic materials or increased environmental benefits. For the purpose of these guidelines, innovative waste water treatment processes and techniques are generally limited to new and improved applications of those alternative processes and techniques identified in accordance with paragraph 4 of these guidelines, including both treatment at centralized facilities and individual and other onsite treatment. Treatment processes based on the conventional concept of treatment (by means of biological or physical/chemical unit processes) and discharge to surface waters shall not be considered innovative waste water treatment processes and techniques except where it is demonstrated that these processes and techniques, as a minimum, meet either the cost-reduction or energy-reduction criterion described in section 6 of these guidelines. Treatment and discharge systems include primary treatment, suspended-growth or fixed-growth biological systems for secondary or advance waste water treatment, physical/chemical treatment, disinfection, and sludge processing. The term "innovative" does not include collector sewers, interceptors, storm or sanitary sewers or the separation of them, or major sewer rehabilitation, except insofar as they meet the criteria in paragraph 6 of these guidelines and are alternatives to conventional treatment works for small communities under §35.915-1(e) or part of individual systems under §35.918.

6. *Criteria for determining innovative processes and techniques.* a. The Regional Administrator will use the following criteria in determining whether a waste water treatment

process or technique is innovative. The criteria should be read in the context of paragraph 5. These criteria do not necessarily preclude a determination by the Regional Administrator that a treatment system is innovative because of local variations in geographic or climatic conditions which affect treatment plant design and operation or because it achieves significant public benefits through the advancement of technology which would otherwise not be possible. The Regional Administrator should consult with EPA headquarters about determinations made in other EPA regions on similar processes and techniques.

b. New or improved applications of alternative waste water treatment processes and techniques may be innovative for the purposes of this regulation if they meet one or more of the criteria in paragraphs e(1) through e(6) of this paragraph. Treatment and discharge systems (*i.e.*, systems which are not new or improved applications of alternative waste water treatment processes and techniques in accordance with paragraph 4 of these guidelines) must meet the criteria of either paragraph 6e(1) or 6e(2), as a minimum, in order to be innovative for the purposes of these guidelines.

c. These six criteria are essentially the same as those used to evaluate any project proposed for grant assistance. The principal difference is that some newly developed processes and techniques may have the potential to provide significant advancements in the state of the art with respect to one or more of these criteria. Inherent in the concept of advancement of technology is a degree of risk which is necessary to initially demonstrate a method on a full, operational scale under the circumstances of its contemplated use. This risk, while recognized to be a necessary element in the implementation of innovative technology, must be minimized by limiting the projects funded to those which have been fully developed and shown to be feasible through operation on a smaller scale. The risk must also be commensurate with the potential benefits (*i.e.*, greater potential benefits must be possible in the case of innovative technology projects where greater risk is involved).

d. Increased Federal funding under §35.908(b) may be made only from the reserve in §35.915-1(b). The Regional Administrator may fund a number of projects using the same type of innovative technology if he desires to encourage certain innovative processes and techniques because the potential benefits are great in comparison to the risks, or if operation under differing conditions of climatic, geology, etc., is desirable to demonstrate the technology.

e. The Regional Administrator will use the following criteria to determine whether waste water treatment processes and techniques are innovative:

(1) The life cycle cost of the eligible portion of the treatment works excluding conventional sewer lines is at least 15 percent less than that for the most cost-effective alternative which does not incorporate innovative waste water treatment processes and techniques (*i.e.*, is no more than 85 percent of the life cycle cost of the most cost-effective noninnovative alternative).

(2) The net primary energy requirements for the operation of the eligible portion of the treatment works excluding conventional sewer lines are at least 20 percent less than the net energy requirements of the least net energy alternative which does not incorporate innovative waste water treatment processes and techniques (*i.e.*, the net energy requirements are no more than 80 percent of those for the least net energy noninnovative alternative). The least net energy noninnovative alternative must be one of the alternatives selected for analysis under section 5 of appendix A.

(3) The operational reliability of the treatment works is improved in terms of decreased susceptibility to upsets or interference, reduced occurrence of inadequately treated discharges and decreased levels of operator attention and skills required.

(4) The treatment works provides for better management of toxic materials which would otherwise result in greater environmental hazards.

(5) The treatment works results in increased environmental benefits such as water conservation, more effective land use, improved air quality, improved ground water quality, and reduced resource requirements for the construction and operation of the works.

(6) The treatment works provide for new or improved methods of joint treatment and management of municipal and industrial wastes that are discharged into municipal systems.

[43 FR 44049, Sept. 27, 1978, as amended at 44 FR 37596, June 27, 1979; 44 FR 39340, July 5, 1979]

Subparts F–G [Reserved]

Subpart H—Cooperative Agreements for Protecting and Restoring Publicly Owned Freshwater Lakes

AUTHORITY: Sections 314, 501 and 518, Clean Water Act (86 Stat. 816, 33 U.S.C. 1251 *et seq.*).

SOURCE: 45 FR 7792, Feb. 5, 1980, unless otherwise noted.

§ 35.1600 Purpose.

This subpart supplements the EPA general grant regulations and procedures (part 31 of this chapter) and establishes policies and procedures for cooperative agreements to assist States and Indian tribes treated as States in carrying out approved methods and procedures for restoration (including protection against degradation) of publicly owned freshwater lakes.

[45 FR 7792, Feb. 5, 1980, as amended at 54 FR 14359, Apr. 11, 1989]

§ 35.1603 Summary of clean lakes assistance program.

(a) Under section 314 of the Clean Water Act, EPA may provide financial assistance to States to implement methods and procedures to protect and restore publicly owned freshwater lakes. Although cooperative agreements may be awarded only to States, these regulations allow States, through substate agreements, to delegate some or all of the required work to substate agencies.

(b) Only projects that deal with publicly owned freshwater lakes are eligible for assistance. The State must have assigned a priority to restore the lake, and the State must certify that the lake project is consistent with the State Water Quality Management Plan (§ 35.1521) developed under the State/EPA Agreement. The State/EPA Agreement is a mechanism for EPA Regional Administrators and States to coordinate a variety of programs under the Clean Water Act, the Resource Conservation and Recovery Act, the Safe Drinking Water Act and other laws administered by EPA.

(c) These regulations provide for Phase 1 and 2 cooperative agreements. The purpose of a Phase 1 cooperative agreement is to allow a State to conduct a diagnostic-feasibility study to determine a lake's quality, evaluate possible solutions to existing pollution problems, and recommend a feasible program to restore or preserve the quality of the lake. A Phase 2 cooperative agreement is to be used for implementing recommended methods and procedures for controlling pollution entering the lake and restoring the lake.